CDAT Newsletter, Jan 2006, News

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News Â – Upcoming 3D plots!

CDAT developers are currently working with NcvtkÂ developers to make Ncvtk 3D graphics accessible to the CDAT community. Ncvtk is a collection of commonly used 3D visualization methods applied to data on structured lat/lon grids.

For the initial release the CDAT/Ncvtk module will not include:

- geodesic grids,
- unstructures grids.

Ncvtk is interactive and it follows an event driven model.

Look for the beta release of this module in mid–April.

Here are some example plots form Ncvtk:

VCDAT to access IPCC data

Program for Climate Model Diagnosis and Intercomparison (PCMDI) atÂ Lawrence Livermore National Laboratory (LLNL) is a home for the main group of the CDAT developers and also collects model output data from the analysis of a set of standard climate–change simulations from major national and international reseach centers and distributes that data through the IPCC Earth System Â Grid II (ESG).

The Intergovernmental Panel on Climate Change (IPCC) / Working Group on Coupled Models (WGCM) data will now be accessible from VCDAT. Â

Working with the pyDAP developer (Roberto De Almeida), the CDAT development team has integrated pyDAP into the IPCC data holdings system for HTPP access (along with the existing FTP access). This will allow a user to select the IPCC ESG OPeNDAP server, authenticate the user access, list files and subdirectories, display metadata information, allow user to

specify advanced searches, and download the chosen data directly into the VCDAT for analysis.Â

Note:
Server−side analysis will be allowed in a later release of VCDAT.

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WebÂ Portal revamped

CDAT Web Portal and Documentation
A comprehensive collection of online CDAT documentation is now available at the PCMDI Software Portal.

This website is growing rapidly. In addition to the standard collection of manuals there are now over 15 tutorials covering both VCDAT (GUI) and scripting usage (e.g., CDMS, Numeric, VCS, etc.). The new "Tips and Tricks" section provides useful advice for CDAT and general Python programming. Future plans include more advanced tutorials and an improved "News" section which will give our users more insight into our current areas of development. For developers and users interested in "getting under the hood", a CDAT API Reference is now available.

CDAT Source Code Repository
Since the Software Portal is built with Plone, a Python−based web content management system, it has advanced collaborative capabilities. Behind the scenes, we are migrating the CDAT source code repository to Subversion, an open−source revision control tool. We plan to offer repository access and Software Portal accounts to outside developers, so they can

create and maintain CDAT Contrib Packages, as well as associated documentation. Visitors will also be able to view the repository (source code, revision history, etc.) directly through the website.

OPeNDAP Data Access
The CDAT development team is working with PyDAP, an open−source Python−based OPeNDAP server. Coupled with CDAT, this server will provide transparent data subsetting and aggregation for interactive use. In other words, CDAT users will be able to access remote files as if they are stored locally. OPeNDAP only downloads the necessary data when a slice or subset is requested. PyDAP will integrate with the existing IPCC Data Portal, so users will be able to download data either via FTP or OPeNDAP using the same username and password.

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